

[LED DEVICE, FLIP-CHIP LED PACKAGE AND LIGHT REFLECTING STRUCTURE]

Abstract

A light emitting diode (LED) device is provided. The LED device includes a device substrate, a first doped layer of a first conductivity type, a light emitting layer, a second doped layer of a second conductivity type, a transparent conductive oxide layer, a reflecting layer and two electrodes. The first doped layer is deposited on the device substrate, the light emitting layer is deposited on a portion of the first doped layer, and the second doped layer is deposited on the light emitting layer. The first and the second doped layers are comprised of III-V semiconductor material respectively. The transparent conductive oxide layer is deposited on the second doped layer, and the reflecting layer is deposited on the transparent conductive oxide layer. The two electrodes are deposited on the reflecting layer and the first doped layer respectively.